

Date: Wednesday, 12/7/2005 8:26:22 AM
 User: Kim Johnston

Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: RING
Job Number	: 25145		
Estimate Number	: 10608		
P.O. Number	: N/A	Part Number	: D2655
This issue	: 12/7/2005 S.O. No. : N/A	Drawing Number	: D2655 REV B
Prsht Rev.	: NC	Project Number	: N/A
First Issue	: N/A Type : PURCHASED PARTS	Drawing Revision	: B
Previous Run	: N/A	Material	: N/A
Written By	: <u>SEE ABOVE DATE & USER</u>	Due Date	: 1/20/2006 Qty: 20 Um: Each
Checked & Approved By	: <u>SEE ABOVE DATE & USER</u>		
Comment	: Est. D 00.06.22 Removed P/O for powder coat EC		

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

1.0	PG	PURCHASING
-----	----	------------



Comment: PURCHASING

Issue P/O: 245

Laser Cut per D2655

Material release note required

U 05/12/07 20

2.0	D2655F	Ring
-----	--------	------



Comment: Qty.: 1.0000 Each(s)/Unit Total: 20.0000 Each(s)
 Ring

3.0	PACKAGING 1	PACKAGING RESOURCE #1
-----	-------------	-----------------------



Comment: PACKAGING RESOURCE #1

Recieve & Inspect for Transit Damage

Ensure Material Release Note is attached

DL 05/12/30 22

4.0	QC6	DIMENSIONAL CHECK
-----	-----	-------------------



Comment: DIMENSIONAL CHECK

20.01.03 22

5.0	SMALL FAB 1	SMALL & MEDIUM FAB RESOURCE 1
-----	-------------	-------------------------------



Comment: SMALL & MEDIUM FAB RESOURCE 1

1-Tumble - .030 Radius

2-Deburr any rough edges after tumbling

SAD 06/01/15 22

W/O:		WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action		Section B		Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng		Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 12/7/2005 8:26:23 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001, Dart Helicopters Services

Drawing Name: RING

Job Number: 25145

Part Number: D2655

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC5

INSPECT WORK TO CURRENT STEP



06-02-06

Comment: INSPECT WORK TO CURRENT STEP

7.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat per QSI 005 4.3.5.1

8.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



a.m 06-02-11

Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

m/ 06 02 13

9.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: *ST 140*

C 206102113 (22)

10.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Inspection Level 21

545 06/02/14

(22)

RD 06/02/14 (22)

Job Completion



W/O:		WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

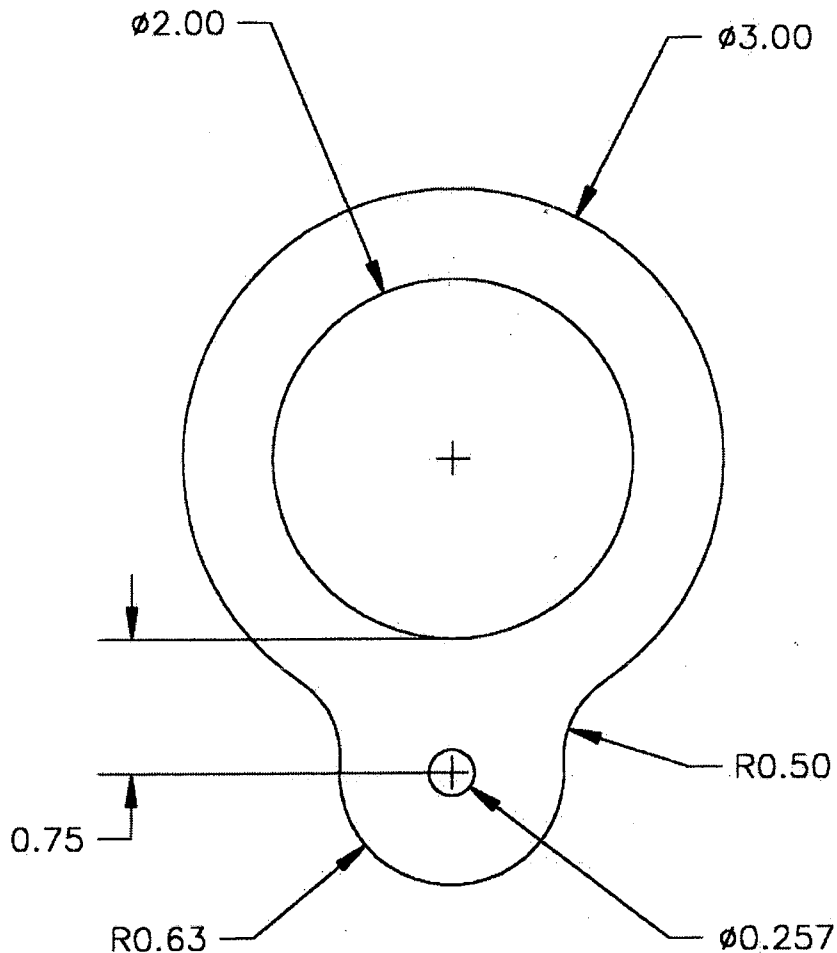
NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action		Section B		Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng		Sign & Date			

NOTE: Date & initial all entries



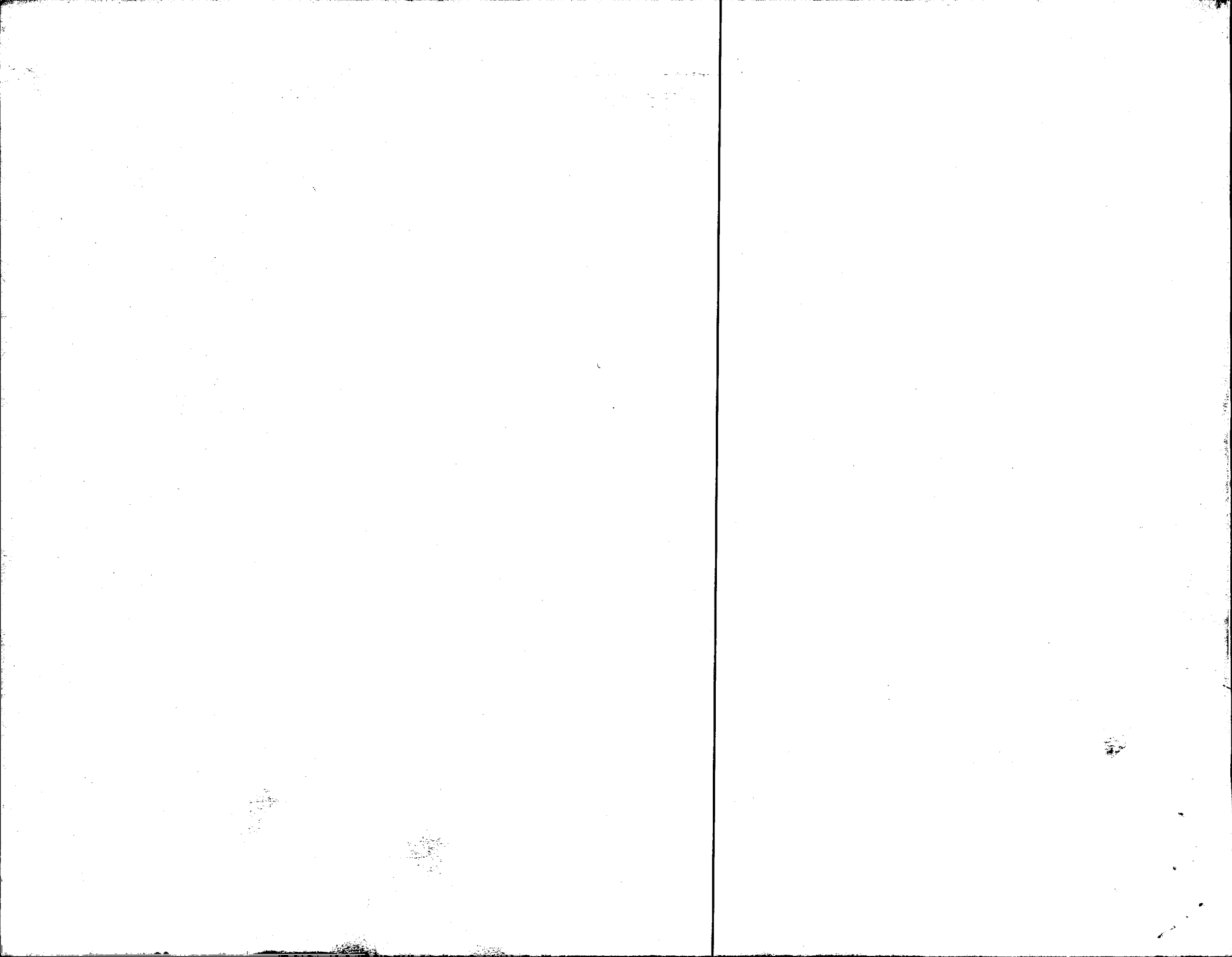
DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE USA, INC. FAIRCHILD INTERNATIONAL AIRPORT, WA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2655	REV. B SHEET 1 OF 1
DATE 97:07:07		TITLE RING	SCALE 1:1
A	97:03:25	NEW ISSUE	
B	97:07:07	ADD ASTM A36 TO MAT. SPEC.	

RELEASED
47/07/11 DS



COPY
TURN TO
ENGINEERING
FOR LED COPY
FOR ENDMENT
FOR NOTICE
WORK ORDER
NO 25145

NOTE: DEBURR ALL SHARP EDGES
MATERIAL: AISI 1018/1020/1025 OR ASTM A36 0.250 THICK
FINISH: POWDER COAT PER DART QSI 005 4.3
TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED





New Zealand Steel Limited
Glenbrook, South Auckland
Postal: Private Bag 92121, Auckland, New Zealand
Telephones: (09) 375 8898 / 375 8111 Auckland
(09) 235 8089 / 235 3535 Waiuku
Fax: (09) 375 8898

TEST CERTIFICATE

Ref: S210722495

CUSTOMER	Wilkinson	P50323 DI001	SPECIFICATION	ASTMA1008 CS Type A	CERTIFICATE No	TC112397
CUSTOMER O/N	90-21N-686		PRODUCT	CRA WIDE COIL	PAGE	1 of 1
MILL O/N	480737		DIMENSIONS	0.055" x 48" x Coil	DATE	09 June 2005

PACK NUMBER	HEAT NO	CHEMICAL COMPOSITION PERCENT															MECHANICAL TESTS (TEST SPECIFICATION - ASTM A370)							
		C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti	Al	B	N2	CE ()	BEND	YIELD	T.S.	%ELONG	HARDNESS	r	LENGTH
		x100			x1000												x10000	x100	180°			G.L.°	HRB	()
R9-459713-00	641758	4	TR	18	4	16	13	19	10	5	3	1	1					Good				54		1585
R9-459714-00	641758	4	TR	18	4	16	13	19	10	5	3	1	1					Good				54		1457
R9-459715-00	641513	5	TR	18	9	18	12	17	15	1	6	1	1					Good				48		1375
R9-459716-00	641513	5	TR	18	9	18	12	17	15	1	6	1	1					Good				48		1473
R9-459717-00	641756	5	TR	20	12	19	12	18	19	1	7	1	1					Good				48		1631
R9-459718-00	641756	5	TR	20	12	19	12	18	19	1	7	1	1					Good				48		1093
R9-459719-00	641756	5	TR	20	12	19	12	18	19	1	7	1	1					Good				50		1562
R9-459720-00	641756	5	TR	20	12	19	12	18	19	1	7	1	1					Good				50		1535
R9-460380-00	641761	4	TR	20	13	17	12	18	25	5	8	1	1					Good				50		1581
R9-460381-00	641758	4	TR	18	4	16	13	19	10	5	3	1	1					Good				49		1562
R9-460382-00	641758	4	TR	18	4	16	13	19	10	5	3	1	1					Good				49		1503
R9-461458-00	642309	2	TR	18	10	20	11	17	19	1	6	1	1					Good				48		1785

YIELD	GAUGE LENGTH (G.L.)			PLASTIC STRAIN RATIO (r)			IMPACT TEST			CARBON EQUIVALENT VALUE (CE)		
(A)=0.2% PROOF STRESS	(A)=200mm	(C)=80mm	(E)=2"	(A)=r0	(C)=r45	(B)=r90	(A)=10mm x 10mm	(B)=7.5mm x 10mm	(C)=5mm x 5mm	(A)=C+Mn/8	(C)=C+Mn/8+Si/24	(D)=
(B)=LOWER YIELD STRESS	(B)=50mm	(D)=5.65? So	(F)=8"	(B)=r90	(D)=(r0+r90+2r45)/4				(D)=2.5mm x 10mm	(B)=C+Mn/8+(Cr+V+Mo)/5+(Cu+Ni)/15		

WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN TESTED AND INSPECTED
WITH SATISFACTORY RESULTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE ABOVE SPECIFICATION

APPROVED

Datish Misra
QC METALLURGIST

16 ga ms

PO# 146, 267, 245,

11/23/2004

18:02

CALIFORNIA STEEL IND. → 916043013244

NO.361 0005



California Steel Industries
14000 San Bernardino Ave.
Fontana, California 92335
Ph (909) 350-6300

CERTIFIED TEST REPORT

CUSTOMER ORDER P40715ME001		MO. NUMBER 02-9906-02	SHIPPING DATE 11/22/04	CAR NUMBER RR: BNSF538814	TALLY NUMBER PO 250442783 1/																											
B I L L T O	WILKINSON STEEL AND METALS A DIVISION OF PREMETAL CO., INC. 888 S.E. MARINE DR., VANCOUVER BC, CANADA, V5X2V3			S H I P T O	WILKINSON STEEL AND METALS A DIVISION OF PREMETAL CO., IN 888 S.E. MARINE DR. VANCOUVER BC V5X 2																											
MARK ALL DOCUMENTS W/P.O. P40715ME001. FAX TALLIES AT TIME OF SHIPMENT TO MEL ELIAS FAX #604-301-3244.																																
END USE	WAREHOUSE STOCK - TO BE LASER CUT																															
PROD	H.R. COILS - P & O - PRIME																															
SPEC	PQ-IN CONFORMANCE WITH ASTM-A-36-96 CHEMICAL AND TENSILE REQUIREMENTS																															
T/R	INSPECTION MILL																															
DESCRIPTION			COILS, PIECES OR BUNDLES	HEAT NUMBER	I CERTIFY THE FOLLOWING TEST INFORMATION TO BE CORRECT AS CONTAINED IN THE RECORDS OF THE COMPANY. CHIEF -- LABORATORY SERVICES																											
.2500 x 48.0000 x COIL, NOM ME			4	M74552																												
MECHANICAL PROPERTIES			CHEMICAL ANALYSIS												13:06:03	11/22/04	CC															
HEAT OR LOT NUMBER	S.A.S. NUMBER	L O C	YIELD x51	TENSILE STRENGTH KSI	% ELONGATION		BEND TEST	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Al	V	Co	Ti	N											
M74552			46.8 46.4	65.0 64.5	22 24			17	1.05	008	005	029	00	00	00	00	040	001	001	001	004											
CTR-001 PTLUC22L 990712																																

PO: 221782

INV: 551102MD019

PO # 245

12-03
1/4" ms